UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/555,809	07/28/2000	Marcello Donati	753-168P	9050

2292	7590	07/15/2004	

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EXAMINER
BAYARD, EMMANUEL

ART UNIT	PAPER NUMBER
2631	

DATE MAILED: 07/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No. 09/555,809	Applicant(s) DONATI ET AL.
	Examiner Emmanuel Bayard	Art Unit 2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>03 May 2004</u>.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-30</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) <u>1-21</u> is/are allowed.

6)☒ Claim(s) <u>22-30</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

This is in response to RCE filed on 5/3/04 in which claims 1-30 are pending.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999

(AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002

do not apply when the reference is a U.S. patent resulting directly or indirectly from an

international application filed before November 29, 2000. Therefore, the prior art date of the

reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA

35 U.S.C. 102(e)).

Claims 22-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Fischer et al

U.S. patent No 5,852,651.

As per claims 22 and 27, Fischer discloses method for generating a test signal to be

applied to a radio frequency receiver having N intelligent antennas, comprising the steps of:

obtaining N digital signals (see figs. 4, 8, 11a, 11b, 19, 27b element 174 and col.2, lines 48-67),

each digital signal replicating a digital multi carrier signal having phase-modulated carriers;

reconstructing N broadband signals by performing digital-to analog conversion (see figs.4, 21b,

29, 32a, 32b, 44 elements 144, 144a, 504, 932and col.8, line 49) and broadband filtering on the

N digital signals (see fig 44 elements 936 and col.13, lines 36-65); obtaining N broadband radio

frequency signals by performing radio frequency conversion on the reconstructed N broadband

signals (see fig.29 element 506); amplifying the N broadband radio frequency signals (see

figs.29, 44 elements 510 938 and col.7, lines 63-65); and applying the amplified N broadband to

input of the receiver, the N inputs bypassing the N intelligent antennas of the receiver wherein

each of the N broadband radio frequency signals simulates a radio frequency signal received by a

corresponding one of the N intelligent antennas (see element 26' col.13, lines 36-45).

As per claim 23, Fischer inherently includes, wherein the obtaining step obtains the N

digital signals based on parameters defining a scenario concerning at least one useful

transmission signal and one or more isofrequential interferent signals, the isofrequential

interferent signals having simulated arrival directions generally different from those of said

relevant useful signals so that different variations of the receive and transmit channel would be

provided by using different combination of power combiners and power splitters.

As per claim 24, Fischer inherently includes, wherein the steps are repeated at time

intervals of a same duration, using new parameters to obtain the N digital signals, thus giving

dynamic and recurrent characteristics to said simulated scenario.

As per claim 25, Fischer inherently includes, wherein the same duration is substantially

equal to, or lower than, 4.61 ms as to accurately reduce noise and error at the output of the

signal.

As per claim 26, Fischer inherently includes, wherein the parameters take into account

the presence of noise, a Doppler effect due to the speed of transmitting mobiles, and quick and

sudden fading of a received electromagnetic field, caused by multiple paths destructive

interference or by masking by obstacles encountered by mobiles in movement as to acquire the

original signal at the output of the system.

As per claim 28, Fischer inherently includes, means for obtaining said N digital signals

from control messages at sequential intervals of identical duration, said control messages being

used to generate a phase-modulated radio frequency test signal as to accurately identify the

original digital signal.

As per claim 29, Fischer inherently includes, means for storing tables of parameters

defining a simulated scenario; and means for converting said tables of parameters to obtain said

control messages as to generate a digital replicate signal similar to the original signal.

As per claim 30, Fischer inherently includes, wherein the stored tables include,

parameters simulating at least one of: presence of noise, a Doppler effect due to speed of

mobiles, and fading of a received electromagnetic field as to acquire the original signal at the

output of the system.

Allowable subject matter

Claims 1-21 are allowed over the prior art of record.

The following is a statement of reasons for the indication of allowable subject matter: the

present invention teaches a simulation process for obtaining a phase modulated radio frequency

test signal. The closest prior arts of Taylor et al U.S. Patent No 5,764,693, Minarik U.S. Patent

NO 6.018,644, Dent U.S. Patent No 6,185,259 , Moriyama U.S. Patent No 6,483,880 B1 and Lu

U.S. Patent No 6,025,758 teach a similar simulation process. However the closest prior arts

mentioned above fail to anticipate or render obvious all the recited features claims 1 and 12.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel Bayard whose telephone number is (703) 308-9573. The examiner can normally be reached on Monday-Thursday from 8:00 AM - 5:30 PM. The examiner can also be reached on alternate Fridays.
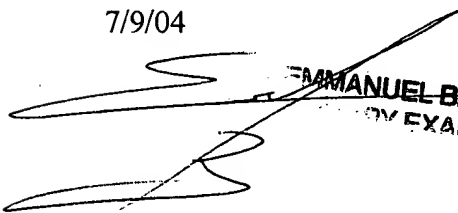
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad H. Ghayour , can be reached on (703) 306-3034. The fax phone number for this Group is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3800.

Emmanuel Bayard

Primary Examiner

7/9/04

EMMANUEL BAYARD
PRIMARY EXAMINER